

NASA DEVELOP – 2023 Spring Proposed Project List

updated 9/21/22

NOTE: These project ideas are **tentative** and **subject to change**. Projects will be conducted either in-person* at a DEVELOP location or virtually, and each node will conduct 1-2 projects for the 2023 spring term. This list may be updated throughout the application period.

The DEVELOP spring 2023 term will offer opportunities for in-person or virtual participation, by project. The work environment of the opportunity will be dependent on the project and DEVELOP location. When selecting your preferred location(s), please pay attention to the type of opportunity selected based on the location and project offers on this document.

*If prior to the start of the fall term it is determined that onsite participation is no longer feasible due to evolving pandemic issues, we will revert locations back to virtual participation as needed. This is a fluid situation, and we are using current information to make decisions. We appreciate your flexibility and understanding if changes are required.

In-person/virtual project opportunities –

Location	In-person Project(s)	Virtual Project(s)
AL – Marshall	X	
CA – Ames	X	
CA – JPL	X	X
CO – Fort Collins	X	X
GA – Athens	X	X
ID – Pocatello	X	
MA – Boston	X	
MD – Goddard	X	
NC – NCEI	X	
VA – Langley	X	
VEJ – Environmental Justice		X
PUP – Pop-up Project at University of Wyoming	X	
PUP – Pop-up Project at University of Virginia	X	

Proposed project list by DEVELOP Location –

AL – Marshall

- ▶ Southeast Water Resources: Evaluating Soil Moisture Conditions and Drought Indicators Surrounding Extreme Drought Events (*In-person project*)
- ▶ [TBD] Climate: Leveraging Land Cover and Aboveground Biomass Products to Evaluate Carbon Emission Trends (*In-person project*)

CA – Ames

- ▶ Maldives Climate II: Addressing Human Development and Coastal Infrastructure in Response to Sea Level Rise (*In-person project*)
- ▶ Marin County Wildfires: Examining Fuel Load and Land Cover Change to Inform Fire Suppression Decisions in Marin County, CA (*In-person project*)

CA – JPL

- ▶ Los Angeles Urban Development: Utilizing NASA Earth Observations to Evaluate the Impact of Tree Coverage on Urban Heat Mitigation (*In-person project*)
- ▶ [TBD] Ecological Forecasting: Using SAR and Optical Products to Derive Wetland Extent and Vegetation Inundation Using Google Earth Engine and Python API (*Virtual project*)

CO – Fort Collins

- ▶ Colorado Front Range Wildfires: Applying Remote Sensing to Monitor and Adapt Forest Fuels Reduction Treatments in Colorado (*In-person project*)
- ▶ Hawai'i Agriculture: Mapping and Monitoring Rangeland Condition Across Management Treatments in Moloka'i, Hawai'i (*Virtual project*)

GA – Athens

- ▶ Georgia Disasters II: Evaluating the Impacts of Hurricane Irma on Georgia Heir Property Owners (*In-person project*)
- ▶ Coronado Ecological Forecasting: Assessing Vegetation Change Due Shifting Social Trails in Coronado National Monument (*Virtual project*)

ID – Pocatello

- ▶ Southern Idaho Ecological Forecasting: Investigating the Impacts of Grazing and Other Vegetation Treatments to Improve Habitat for Wildlife in Idaho's Stirling Management Area (*In-person project*)

MA – Boston

- ▶ New Hampshire Ecological Forecasting: Predicting Future Conflicts between Loon Habitat in New Hampshire with Earth Observations (*In-person project*)

MD – Goddard

- ▶ Peru & Bolivia Climate: Estimating Soil Organic Carbon using NASA Earth Observations to Inform Irrevocable Carbon Reserve Management in Peru and Bolivia (*In-person project*)

NC – NCEI

- ▶ Northeast Alaska Climate: Evaluating Snow Variability through a Climatological Analysis to Support Ecological Monitoring in Northeast Alaska (*In-person project*)

VA – Langley

- ▶ Colorado Springs Health & Air Quality: Using Earth Observations to Monitor Wildfire Smoke and Air Pollution for Enhanced Air Quality Management in Colorado Springs, Colorado (*In-person project*)

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VEJ – Environmental Justice Projects

- ▶ New York City Transportation & Infrastructure: Assessing Urban Heat Island Effects and Tree Canopy Coverage at Bus Stops in New York City's Outer Boroughs to Support Cooling Interventions (*Virtual project*)
- ▶ Salt Lake City Health & Air Quality: Monitoring Lakebed Exposure and its Impact on Air Quality and Environmental Hazards in Salt Lake City, Utah (*Virtual project*)

PUP – Pop-up Project at University of Wyoming

- ▶ Shoshone River Water Resources II: Quantifying Sediment Input in the Shoshone River in Wyoming using the Soil and Water Assessment Tool for Enhanced Water Quality Monitoring (*In-person project*)

PUP – Pop-up Project at University of Virginia

- ▶ InVEST Urban Development: Incorporating Earth Observation Data into the Integrated Valuation of Ecosystem Services and Tradeoffs (InVEST) Urban Flood Risk Mitigation Model using a Python API (*In-person project*)